Sediment TWG Feedback Form

for Draft Forest Roads Management Approach

Forest Road Objectives:

1. Working definition of the universe of roads in consideration:

- Please list any road types that have not been included and that should be?

The basis for the Page 1 assumption that roads constructed under the FPA rules and guidance in place since 1984 "are likely hydrologically disconnected to the greatest degree possible and have acceptable levels of risk" is not supported. Problems with this assumption are also imbedded in the first Forest Road objective on Page 2. We support all roads meeting FPA regulations and guidelines but do not see a basis provided for claiming that would meet water quality goals for sediment. We also support the importance of landowners knowing about identified road problems (third Forest Road objective) but believe that should apply to all roads causing water quality problems, not just pre-FPA roads. An additional element of the third objective should be that identified road problems "are addressed in a reasonable timeframe".

We recommend that a broader universe of roads be considered in the Forest Roads Management Approach for the following reasons:

1) ODF's 1996 Report: Evaluation of the *Effectiveness of Forest road BMPS to Minimize Stream Sediment Impacts (attached to transmittal e-mail)* found that "twenty-five percent of road length [on State and private forest lands in OR] clearly discharged into streams, and an additional six-percent may have delivered water and sediment into streams." This conflicts with the draft Forest Road Management Approach assumptions about hydrologic connectivity based on 1984 rules and guidance. 2003 wet weather haul and drainage related changes may have reduced the percentage of road length connected to streams to the "greatest degree possible and have acceptable levels of risk" but the basis for that conclusion has not been provided. The current OR forest road BMPs are sound but do not clearly ensure that legacy road problems will be systematically addressed in OR's coastal basins. Limiting the universe of roads considered to 1984 (or to 2003 without additional information) is not supported.

2) Stream parallel roads proximate to streams, roads crossing head wall areas, and roads on unstable slopes are of particular concern. Since much of the current forest road network foot print predates more modern forest road sighting and construction requirements, road location and history are critical to consider in the forest roads management approach.

3) A comprehensive, systematic approach to addressing road /water quality problems is both feasible and has demonstrated results. In 2001 WA DNR forest road regulations, including road management and abandonment plan (RMAP) requirements were put in place. Implementation of the WA forest roads regulations on private and state forest lands in WA (with similar forest types, topography and precipitation to OR's forest lands) has achieved low levels of forest road connection to streams on working forest lands. Effectiveness monitoring of the WA Forest Road program found an average of 11 percent of the road network was hydrologically connected to streams or wetlands forest roads *(Monitoring report attached to transmittal e-mail)*. A high

percentage of roads in the sampled units had completed RMAP work or already had roads that met rule standards. There were 10 years remaining to fully complete RMAP requirements when sampling for the effectiveness monitoring study began and 88 percent of the units sampled already were meeting the sediment performance target (tons of delivered sediment/year/miles of stream).

Does OR know how many roads/road miles fall under each road category? Since the expectations are different for each category, it would be helpful to have a sense of how large each category is.

2. Criteria for sediment delivery potential:

- Please provide any details or clarifications suggested for the following sections in the Approach:

Criteria for sediment delivery potential	Suggestions
Risks of Chronic Sediment Delivery	% Hydrologic connectivity, total length of road draining to streams (road miles/sq.mile); capacity of run out retention basins to deal with road runoff from large (50 - 100-yr.) storm events; distance of stream parallel roads from streams (0 to 200'); number of stream crossings per square mile; distance of effective water bars or road ditching from stream crossing; % of road length with rutting or visible surface erosion; % of unimproved road surface per square mile; (see also 7 listed parameters be.
Episodic Delivery	% of road network or miles of road on unstable slope; % of road network crossing headwalls or number of headwall crossing/square mile; culvert capability to convey 50 to 100 year storm flows; culvert sized equivalent to bankfull width or to pass large wood downstream; % of road with sidecast, cutslope, or crossing fill conditions not meeting OR FPA Rules, ODF Interpretive Guidance, or Technical Note specifications or direction ; Multiple road crossings of a high gradient stream (not in itself a high risk but where there is an upper crossing that has an issue it can magnify the sediment input.
Common Factors	impacts to spawning and rearing salmonids and public water supplies during significant rain events

Additional Suggestions:

Table 1. FFR Sediment Performance Targets for Roads

Measure	Performance Target	
	New Roads	Existing Roads
RLEN - Ratio of road length delivering to streams/total stream length (mile/mile)		Not to exceed: Coast (Spruce) 0.15-0.25 West of Crest 0.15-0.25
RSED - Ratio of road sediment production delivered to streams/total stream length (tons/yr/mile)		Not to exceed: Coast (Spruce) 6-10 West of Crest 2-6

(Source: Forests and Fish Report, Schedule L-1, June 2000)

The performance targets for road hydrologic connectivity to streams (RLEN) and surface sediment delivery (RSED) were developed in 2000 to supplement qualitative road standards identified in the Forest and Fish Report (Table 1). Target values were derived from sediment production estimates for forest road networks across Washington inventoried as part of Watershed Analyses done during the 1990s. Watershed analysts compiled road sediment delivery within sub-basins of similar scale to this study, each of which was given an aquatic hazard rating of Low, Moderate or High. The ranges bracketed by the RLEN and RSED targets correspond to sub-basins rated Low hazard and the lower values rated Moderate hazard. Targets are documented by a 'range' rather than a single value because the scientific information available to quantify aquatic sensitivity to sediment was insufficient to support a single threshold value.

- Are additional details (or clarifications) necessary for the ranking guidelines? If so, please list below:

Taking a targeted approach that prioritizes roadways more likely to deliver sediment to streams is a good approach and in line with CZARA guidance. However, it's unclear if that inventory and schedule is limited to just "legacy" roads or to all roads (including active ones). The first bullet under the Private Industrial Forestlands states "submit a schedule for "legacy and other road improvements" implying that active forest roads would also be considered. However, the introduction on the first page notes forest roads built consistent with current rules "are considered protective of water quality" which implies they would be exempt from any inventories for corrective actions. In order to satisfy CZARA requirements, it must be clear that both "legacy" and active roads would be included. (See overall feedback below).

  - While fish-bearing streams and drinking water sources may deserve higher priority than other streams, the importance of addressing sediment loading to non-fish bearing streams cannot be ignored.
  - Will there be additional guidance given as to what the thresholds should be for high, med and low priorities? Providing some general guidance that provides flexibility may be helpful.

- Do you have suggestions for prioritizing project areas in which to do road work?
  No

3. Inventory/Information/Planning:

- What type of information collection (methods, level of detail, means of processing/storage, etc.) is necessary to allow road system managers to quantify the number and type of water quality risks due to forest roads?

NOAA and EPA recommended that OR inventory forest roads and develop a schedule for making improvements so we are pleased that the state is moving forward with the approach as part of the mid-coast IR TMDL. The types of information listed seem appropriate although additional detail on the type of method that landowners should use for conducting the survey will be important for consistency and ensure quality results.

From the description provided, it wasn't clear when (or how often?) the private industrial forest lands needed to submit their road inventory and schedule for improvements.

For Family Forestlands, what type of "survey" are they supposed to conduct? Also, what is considered an "immediate or near-term" water quality risk? Will family foresters conducting self-surveys be able to make that assessment? Will additional guidance be provided? "As quickly as possible" is very vague and open to many different interpretations. To one person, that could mean "5 years from now." It would be helpful to include more concrete timeframes such as: "as quickly as possible, not to exceed X months or one year?"

- Do you have suggested changes to the inventory and assessment metrics? (e.g. are there road situations that need to be included but are not listed or vice versa?)
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- Please list any information on identification protocols for road risks, either additional references or protocol suggestions?
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- Please list any suggested changes for the Improvement and Removal Planning requirement.
    - Providing additional guidance or suggestions on how to prioritize roads for improvement would be helpful. Recommend including a "worst first" concept in terms of improvements or removal actions needed to protect water quality, drinking water or fish spawning and rearing.
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- Please provide any suggested elements for a Biennial Progress Report format (should convey the needed information, avoid being burdensome, be adaptable to other road sectors).
    - Keeping it simple. Perhaps: Which priority roads segments were addressed. Brief description of how they were addressed. List of segments that remain and any changes to priority rankings.
- Timeline and Milestones:

Calendar Year	TMDL Year	Action Milestone	Suggestions
2013	0	TMDL Approved	
2015	2	Inventory & Assessment Completed; Start Road Work	
2017	4	Improvement & Removal Plan Approved	
2019	6	-	
2021	8	25% of Plan Work Completed	
2023	10	-	
2025	12	50% of Plan Work Completed	
2027	14	-	
2029	16	75% of Plan Work Completed	
2031	18	-	
2033	20	100% of Plan Work Completed	

- Should the requirements for family forestlands (private nonindustrial) be based on ownership size or operational intensity/volume, and what threshold should differentiate between industrial and nonindustrial landowners?

- What (if any) types of monitoring are not included in the Monitoring/Evaluation section but should be?

- Do you have suggestions for or access to additional monitoring resources or suggestions for coordination of monitoring resources?

4. Identify BMPs:

- Please provide suggestions for references in addition to those cited in the document for use in choosing suites of BMPs for the various road situations that are a risk to water quality & beneficial uses?
    - For recommended BMP guides, EPA Coastal Nonpoint Program Guidance for the Forestry Measures may not be the most effective guide to list. NOAA and EPA found that OR's FPA was adequate for meeting the basic CZARA forestry measures but water quality impairments were still occurring so placed an additional condition on OR's Coastal Nonpoint Program to develop additional management measures where water quality impairments and degradation of beneficial uses attributable to forestry exist despite implementation of the forestry measures included in Chapt. 3.
    - WA State's forest road BMPS and forest road BMPs that apply to Northern CA coastal basins should be considered.
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- Please list any experts and practitioners that you feel would provide valuable insight for the road situation/BMP table for this TMDL.
    - Bill Weaver, (billw@pacificwatershed.com), Principal Pacific Watershed Associates P.O. Box 4433, Arcata, CA 95518, 707-839-5130; 707-839-8168 fax
    - Chris Mendoza, WA CMER (Forests and Fish research/science program workgroup evaluating WA forest practices 360-280-3994
    - Stephen Bernath, WA Dept. of Ecology (sber461@wa.ecy.gov) 360-407-6459, ex-DNR, co-chair Forests and Fish policy group
    - Mark Hicks, WA Dept. of Ecology (mhic461@wa.ecy.gov) 360-407-6477, co-chair CMER
    - Charlie Luce, USDACharlie Luce, cluce@fs.fed.us Research Hydrologist, USDA Forest Service 322 E. Front St., Suite 401, Boise, ID 83702 (208) 373-4382 Office
    - Leslie Bach, OR TNC, co-author of Forest Roads Study

- Do you have suggestions for guidelines for choosing among BMPs? For example, when should transportation restrictions be used? Minor upgrades? Major upgrades? Vacation (removal of road)?
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General:

Overall feedback:

It appears that OR assumes that roads built consistent with the current forest road construction and maintenance rules are considered protective of water quality and do not need to be included in this inventory (see statement in introduction). This is not what NOAA and EPA found in our 1998 conditional approval findings for OR's Coastal Nonpoint Program. That findings document notes that: "EPA and NOAA have identified areas where existing practices under the FPA and FPR should be strengthened to attain water quality standards and fully support beneficial uses. These areas include protection of medium, small, and non-fish bearing streams, including intermittent streams; protection of areas at high risk for landslides; the ability of forest practices to address cumulative impacts of forestry activities; road density and maintenance, particularly on so-called "legacy" roads; and the adequacy of stream buffers for application of certain chemicals." [emphasis added].

NOAA and EPA's June 2008 letter to ODEQ and DLCD also states that, "It is not clear how the rules address water quality impairments associated with legacy roads and a large portion of the existing road network where construction/reconstruction is not proposed. We recommend adoption of a road mapping and abandonment program that creates a requirement and timeline for addressing all active and legacy roads to ensure that water quality is protected." Therefore, we are supportive of this approach to identify and address problematic forestry roads. However, as noted in comments to #3 above, given what's stated in the intro, it's still not clear exactly which roads will be included in the survey, etc. To address NOAA and EPA's concerns for CZARA purposes, the road surveys must address all forestry roads, not just "legacy roads" or those built pre-FPA.

- Do the 5 objectives address the information needs for forest roads? If not, what additional questions need to be asked?

The 5 objectives look good (with some clarifications noted above). However, the success of objective 5 will depend largely on the BMPs selected/recommended so we will be interested to see how the list of recommended BMPs develops and if the BMPs will be adequate to address our concerns.

While the 5 objectives seem straightforward, not all of the TMDL Goals & Objectives appear to align with CZARA goals. For example, the forest roads goals should reflect no exceedance of water quality standards due to forest roads or forestry operations on all roads (public and private), not just public roads. Also, as noted above under "Overall Feedback", NOAA and EPA have already stated that just adhering to FPA requirements is not enough to achieve water quality goals for sediment. Therefore, that goal/objective should be struck.

- Are there gaps in the Approach that have not been discussed in responses to the questions above and how can they be filled?

The discussion captures the CZARA issues well.

- How important do you feel it is to explore options for expanding the geographic scope to the entire Mid Coast basin?

Starting with a pilot area (OWEB Region 2) is fine but there should also be a process for expanding to other areas of the mid-coast listed for sediment to meet CZARA purposes.

- Please provide any additional references for assessment of forest road risks to water quality or forest road BMPs?
- Recovery of Wild Salmonids in Western Oregon Forests: Oregon Forest Practices Rules and the Measures in the Oregon Plan for Salmon and Watersheds. IMST Report 1999-1, Sept. 8, 1999
- See attached Forest Road effectiveness monitoring reports